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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/001,319      | 10/31/2001  | Terrence Jones       | 10010587-1          | 3397             |

7590 01/13/2006

AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
P.O. Box 7599  
Loveland, CO 80537-0599

EXAMINER

KANG, INSUN

ART UNIT PAPER NUMBER

2193

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/001,319 | <b>Applicant(s)</b><br>JONES ET AL. |  |
|                              | <b>Examiner</b><br>Insun Kang        | <b>Art Unit</b><br>2193             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10/17/2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This action is in response to the RCEamendment filed 10/17/2005.
2. As per applicant's request, claims 1 and 14 have been amended. Claims 1-23 are pending in the application.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 14-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's Admitted Prior Art (hereinafter referred to as "APA") disclosed in the instant application.

Claim 14:

APA discloses:

- a supervising automation software module, coupled to a control software module of a computer program product, said automation software module operable to initiate operation of the structure ("Often the design using an embedded controller...allows the fixturing device...to be operated autonomously," page 4 lines 6-21)

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- a fixturing device, coupled to the control software module, operable to hold a product under test stationary and to support motions that allow for connection to the product under test (i.e. pages 2-4).
- said fixturing device further comprising ("an embedded controller...such as a programmable logic controller...embedded within fixturing device...to control fixture system," page 4 lines 6-21)
- a firmware module, said firmware module operable to receive one or more stimuli, preferably corresponding to one or more hardware state changes of said fixturing device ("This type of fixturing device 220 has an embedded controller 230 with advanced firmware 240. The firmware 240 supports an extensive command set that includes high-level commands for normal operation. The test software 210 does not need to have intimate knowledge of the fixturing device 220 internal operation, although the fixturing device 220 does depend upon the controlling software 210 for basic operation. This is because the controlling software 210 polls the fixturing device 220 for changes in state, prior to executing commands to change the state of the fixturing device 220," page 4 lines 6-21)
- ↳ - one or more local memory modules, coupled to the firmware module, said local memory modules operable to contain one or more compiled macros and the one or more stimuli preferably corresponding to the one or more hardware states ("The embedded controller...is operable to respond to events...generated by changes in the hardware state...of the fixturing device," APA, page 4 lines 6-21)

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- the one or more compiled macros, in response to the firmware module receiving the one or more stimuli, causing the one or more hardware states of the fixturing device to be changed ("The embedded controller...is operable to respond to events...generated by changes in the hardware state...of the fixturing device," APA, page 4 lines 6-21) .

Per claim 15:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the one or more stimuli are events receivable by the firmware module ("The embedded controller...is operable to respond to events...generated by changes in the hardware state...of the fixturing device," APA, page 4 lines 6-21).

Per claim 16:

The rejection of claim 14 is incorporated, and further, APA teaches:

-the one or more stimuli are commands receivable by the firmware module (APA, page 4 lines 6-21).

Per claim 17:

The rejection of claim 14 is incorporated, and further, APA teaches:

-the control software module is coupled to the fixturing device via an electronic transmission cable (APA, page 4 lines 6-21) as claimed.

Per claim 18:

The rejection of claim 14 is incorporated, and further, APA teaches:

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- one or more of the one or more local memory modules are nonvolatile (APA, page 4 lines 6-21) as claimed.

Per claim 19:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the firmware module is operable to change the one or more hardware states in response to the one or more stimuli (APA, pages 2-4) as claimed.

Per claim 20:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the one or more compiled macros were previously compiled using the control software module (APA, pages 2-4) as claimed.

Per claim 21:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the one or more compiled macros are operable to be interpreted during an operational mode of fixturing device (APA, pages 2-4) as claimed.

Per claim 22:

The rejection of claim 14 is incorporated, and further, APA teaches:

- the control software module sends one or more commands, receivable by the firmware (APA, pages 2-4) as claimed.

Per claim 23:

The rejection of claim 22 is incorporated, and further, APA teaches:

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-the firmware module, upon receiving the one or more commands, executes one or more of the one or more compiled macros contained within the one or more local memory modules (APA, pages 2-4) as claimed.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter referred to as "APA") disclosed in the instant application in view of Halviatti et al. (US Patent 5,475,843) hereinafter referred to as "Halviatti."

Per claim 1:

APA discloses:

-facilitation modification of a hardware state of a fixture system ("The embedded controller...is operable to respond to events...generated by changes in the hardware state...of the fixturing device," APA, page 4 lines 6-21)

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-triggering a macro of one or more compiled macros in response to one or more stimuli , wherein said one or more macros are created using a high-level programming macro language (i.e. pages 2-4).

APA does not explicitly teach compiling one or more compiled macros into a format recognizable by an interpreter residing within a fixturing device. However, Halviatti teaches it was known in the pertinent art, at the time applicant's invention was made, to have a script consist of easy-to-maintain, high-level testing commands (Halviattie, i.e. abstract). It would have been obvious for one having ordinary skill in the art to modify APA's disclosed system to incorporate the teachings of Halviatti. The modification would be obvious because one having ordinary skill in the art would be motivated to change the hardware states of the fixturing device autonomously by using easily modifiable high level macro commands as suggested by Halviatti ( i.e. abstract).

APA in view of Halviatti further discloses transferring the one or more compiled macros to a firmware residing within the fixturing device; and the firmware running the triggered macro and executing one or more commands contained therein in response thereto, thereby facilitation modification of the hardware state of the fixture system comprising the fixturing device and the one or more macros that allow the fixture system to interact with a product under test, wherein the fixturing device is operable to hold the product under test stationary and to support motions hat allow for connection to the product(i.e. pages 2-4).

Per claim 2:

The rejection of claim 1 is incorporated, and further, APA teaches:



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-each of the one or more commands are interpreted sequentially (i.e. pages 2-4).

Per claim 3:

The rejection of claim 1 is incorporated, and further, APA teaches:

-the high level macro programming language may be determined by the fixturing system (i.e. pages 2-4) as claimed.

Per claim 4:

The rejection of claim 1 is incorporated, and further, APA teaches:

-the one or more macros are compiled external to the fixturing device (i.e. pages 2-4).

Per claim 5:

The rejection of claim 1 is incorporated, and further, APA teaches:

- prior to the firmware interpreting the triggered macro, a triggered macro byte code is transferred to a local memory of the fixturing device (i.e. pages 2-4).

Per claim 6:

The rejection of claim 1 is incorporated, and further, APA teaches:

- the macro is triggered by one or more internal events corresponding to one or more hardware states of the fixturing device (i.e. pages 2-4).

Per claim 7:

The rejection of claim 6 is incorporated, and further, APA teaches:

- the one or more internal events are stored in a nonvolatile memory of the fixturing device (i.e. pages 2-4)as claimed.

Per claim 8:

The rejection of claim 1 is incorporated, and further, APA teaches:

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- the macro is triggered by one or more external commands transmitted by a control software module (i.e. pages 2-4) as claimed.

Per claim 9:

The rejection of claim 8 is incorporated, and further, APA teaches:

- the control software module is a compiler for the one or more macros (i.e. pages 2-4) as claimed.

Per claim 10:

The rejection of claim 1 is incorporated, and further, APA teaches:

- the one or more macros are compiled into byte code (i.e. pages 2-4) as claimed.

Per claim 11:

The rejection of claim 10 is incorporated, and further, APA teaches:

- the byte code is downloaded into a nonvolatile memory of the fixturing device (i.e. pages 2-4) as claimed.

Per claim 12:

The rejection of claim 11 is incorporated, and further, APA teaches:

- one of a revision code is downloaded with the byte code, said revision code operable to determine a version of one or more macros currently loaded within the fixturing device (i.e. pages 2-4) as claimed.

Per claim 13:

The rejection of claim 12 is incorporated, and further, APA teaches:

-during a system initialization, further comprising: a control software comparing a first macro revision with a second macro revision determined by a default macro file; and if

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the first macro revision and the second macro revision are not equivalent, the control software compiling and downloading the one or more macros from a file (i.e. pages 2-4) as claimed.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Insun Kang whose telephone number is 571-272-3724. The examiner can normally be reached on M-F 7:30-4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on 571-272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

I. Kang  
Examiner  
AU 2193

  
**KAKALI CHAKI**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER**